

Xiaoming Zhai

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/9345150/publications.pdf>

Version: 2024-02-01

27
papers

814
citations

706676

14
h-index

620720

26
g-index

27
all docs

27
docs citations

27
times ranked

431
citing authors

#	ARTICLE	IF	CITATIONS
1	Assessing computational thinking: A systematic review of empirical studies. <i>Computers and Education</i> , 2020, 148, 103798.	5.1	284
2	Applying machine learning in science assessment: a systematic review. <i>Studies in Science Education</i> , 2020, 56, 111-151.	3.4	92
3	Assessing learning in technology-rich maker activities: A systematic review of empirical research. <i>Computers and Education</i> , 2020, 157, 103944.	5.1	41
4	From substitution to redefinition: A framework of machine learning-based science assessment. <i>Journal of Research in Science Teaching</i> , 2020, 57, 1430-1459.	2.0	38
5	A Meta-Analysis of Machine Learning-Based Science Assessments: Factors Impacting Machine-Human Score Agreements. <i>Journal of Science Education and Technology</i> , 2021, 30, 361-379.	2.4	32
6	Applying machine learning to automatically assess scientific models. <i>Journal of Research in Science Teaching</i> , 2022, 59, 1765-1794.	2.0	32
7	Practices and Theories: How Can Machine Learning Assist in Innovative Assessment Practices in Science Education. <i>Journal of Science Education and Technology</i> , 2021, 30, 139-149.	2.4	30
8	Developing a Learning Progression of Buoyancy to Model Conceptual Change: A Latent Class and Rule Space Model Analysis. <i>Research in Science Education</i> , 2020, 50, 1369-1388.	1.4	26
9	Understanding How the Perceived Usefulness of Mobile Technology Impacts Physics Learning Achievement: a Pedagogical Perspective. <i>Journal of Science Education and Technology</i> , 2020, 29, 743-757.	2.4	26
10	Using Machine Learning to Score Multi-Dimensional Assessments of Chemistry and Physics. <i>Journal of Science Education and Technology</i> , 2021, 30, 239-254.	2.4	26
11	Evaluation of construct-irrelevant variance yielded by machine and human scoring of a science teacher PCK constructed response assessment. <i>Studies in Educational Evaluation</i> , 2020, 67, 100916.	1.2	23
12	Understanding the relationship between levels of mobile technology use in high school physics classrooms and the learning outcome. <i>British Journal of Educational Technology</i> , 2019, 50, 750-766.	3.9	22
13	One-to-one mobile technology in high school physics classrooms: Understanding its use and outcome. <i>British Journal of Educational Technology</i> , 2018, 49, 516-532.	3.9	21
14	On the Validity of Machine Learning-based Next Generation Science Assessments: A Validity Inferential Network. <i>Journal of Science Education and Technology</i> , 2021, 30, 298-312.	2.4	20
15	Assessing Argumentation Using Machine Learning and Cognitive Diagnostic Modeling. <i>Research in Science Education</i> , 2023, 53, 405-424.	1.4	17
16	Teachers' use of learning progression-based formative assessment to inform teachers' instructional adjustment: a case study of two physics teachers' instruction. <i>International Journal of Science Education</i> , 2018, 40, 1832-1856.	1.0	13
17	Examining the Uses of Student-Led, Teacher-Led, and Collaborative Functions of Mobile Technology and Their Impacts on Physics Achievement and Interest. <i>Journal of Science Education and Technology</i> , 2019, 28, 310-320.	2.4	13
18	Advancing automatic guidance in virtual science inquiry: from ease of use to personalization. <i>Educational Technology Research and Development</i> , 2021, 69, 255-258.	2.0	10

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19	Validating a partial-credit scoring approach for multiple-choice science items: an application of fundamental ideas in science. <i>International Journal of Science Education</i> , 2021, 43, 1640-1666.	1.0	9
20	Becoming a teacher in rural areas: How curriculum influences government-contracted pre-service physics teachers' motivation. <i>International Journal of Educational Research</i> , 2019, 94, 77-89.	1.2	8
21	Examining adults'™ web navigation patterns in multi-layered hypertext environments. <i>Computers in Human Behavior</i> , 2022, 129, 107142.	5.1	8
22	Assessing high school students' modeling performance on Newtonian mechanics. <i>Journal of Research in Science Teaching</i> , 2022, 59, 1313-1353.	2.0	8
23	Developing effective and accessible activities to improve and assess computational thinking and engineering learning. <i>Educational Technology Research and Development</i> , 0, , 1.	2.0	4
24	Motivating preservice physics teachers to low-socioeconomic status schools. <i>Physical Review Physics Education Research</i> , 2020, 16, .	1.4	3
25	A Framework of Construct-Irrelevant Variance for Contextualized Constructed Response Assessment. <i>Frontiers in Education</i> , 2021, 6, .	1.2	3
26	Examining Humans'™ Problem-Solving Styles in Technology-Rich Environments Using Log File Data. <i>Journal of Intelligence</i> , 2022, 10, 38.	1.3	3
27	Re-validating a Learning Progression of Buoyancy for Middle School Students: A Longitudinal Study. <i>Research in Science Education</i> , 2022, 52, 1761-1789.	1.4	2